Amendments To The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1. (Currently Amended) A method for proliferating a hepatitis C virus, characterized by

providing a porous carrier capable of immobilizing human hepatocyte thereon being placed in a culture vessel and streaming a liquid culture medium from periphery, bottom or upper side of the culture vessel toward the opposite side continuously; ~~making a liquid culture medium flow around the periphery of a carrier being placed in a culture vessel and capable of immobilizing a cell with low adhesivity thereon;~~

immobilizing and proliferating the ~~cell with low adhesivity~~human hepatocyte on the porous carrier, and

allowing the ~~cell~~ human hepatocyte under culture to be infected with a hepatitis C virus to proliferate the hepatitis C virus.

2. (Original) A method according to claim 1, where the carrier is a particulate porous carrier.

3. (Cancelled).

4. (Currently Amended) A method according to ~~any one of claims 1 to 3~~claim 1 or claim 2, where ~~the~~ the human hepatocyte ~~cell with low adhesivity~~ is an established cell.

5 (Cancelled).

6. (Currently Amended) A method according to ~~any one of claims 1 to 5~~claim 1 or claim 2, where the flow of the liquid culture medium around the periphery of the carrier is a flow from the outer periphery of the culture vessel toward the center thereof.

7. (Currently Amended) A method for proliferating a hepatitis C virus, characterized by

allowing human hepatocyte maintained in a ~~radial flow type hepatocyte~~ bioreactor to permit a liquid culture medium to flow from the periphery of the main bioreactor unit placing therein a particulate porous carrier immobilizing thereon the hepatocyte toward the center thereof, to be infected with a hepatitis C virus, and

continuously allowing the liquid culture medium to flow from the periphery of the main bioreactor unit toward the center thereof to culture the human hepatocyte to thereby proliferate the infectious hepatitis C virus in the hepatocyte.

8. (Currently Amended) A method according to claim 7, where the human hepatocyte is of an established cell line.

9. (Original) A method according to claim 8, where the established cell line is the FLC-4 line (FERM BP-5165).

10. (Currently Amended) A method according to any one of claims 7 to 9, where the infection with the hepatitis C virus is carried out by adding the hepatitis C virus to the liquid culture medium, the method being characterized by

a step of adding the hepatitis C virus to the liquid culture medium and subsequently circulating the culture medium used under no supply of any fresh one of the culture medium, and

a step of subsequently stopping the flow of the liquid culture medium and circulating the culture medium under no supply of fresh one of the culture medium.

11. (Currently Amended) A method according to any one of claims 7 to ~~10, to~~ 9, characterized in that the supply velocity of fresh one of the culture medium and the supply velocity of oxygen are increased more than those velocities till then, prior to the addition of the hepatitis C virus to the liquid culture medium.

12. (Cancelled).

13. (Currently Amended) A proliferation apparatus of a ~~hepatitis virus~~human hepatocyte, characterized in that the apparatus is a ~~radial flow type hepatocyte~~ bioreactor having

a main bioreactor unit capable of allowing a liquid culture medium to flow from the periphery to the center thereof a liquid culture medium supply conduit supplying the liquid culture medium to the periphery of the main bioreactor unit,

a particulate porous carrier placed in the inside of the main bioreactor unit to immobilize human hepatocyte thereon, and

a liquid culture medium discharge conduit positioned in the inside of the main bioreactor unit for discharging the liquid culture medium from the main bioreactor unit.

14. A proliferation apparatus according to claim 13, which is a proliferation apparatus of hepatitis type C virus.

15. (Currently Amended) A method for proliferating a human hepatocyte ~~cell~~ with ~~low adhesivity~~ characterized by

~~making a liquid culture medium flow around the periphery of a carrier capable of immobilizing thereon the cell with low adhesivity in a culture vessel placing therein the carrier, and~~

~~immobilizing and proliferating the cell with low adhesivity on the carrier~~

immobilizing the hepatocyte on a particulate porous carrier and allowing a liquid culture

medium to flow from the periphery of a main bioreactor unit placing therein the particulate porous carrier toward the center thereof, to proliferate the hepatocyte on the particulate porous carrier.

16. (Original) A method according to claim 15, where the proliferation is three-dimensional proliferation.

17. (Cancelled).

18. (Currently Amended) A method according to claim 15 ~~to 17 or 16~~, where the ~~cell with low adhesivity~~ human hepatocyte is an established cell.

19-20. (Cancelled).